


BLAST

Basic Local Alignment Search Tool

- Your search parameters were adjusted to search for a short input sequence.

[Edit](#) [and Resubmit](#) [Save Search Strategies](#) [Formatting options](#) [Download](#)

Protein Sequence (19 letters)

Results for: 

Your BLAST job specified more than one input sequence. This box lets you choose which input sequence to show BLAST results for.

Query ID

|cl|43388

|cl|43388

Description

None

Molecule type

amino acid

Query Length

11

Database Name

nr

Description

All non-redundant GenBank CDS translations+PDB+SwissProt+PIR+PRF excluding environmental samples from WGS projects

Program

BLASTP 2.2.22+ [Citation](#)

Reference

Stephen F. Altschul, Thomas L. Madden, Alejandro A. Schäffer, Jinghui Zhang, Zheng Zhang, Webb Miller, and David J. Lipman (1997), "Gapped BLAST and PSI-BLAST: a new generation of protein database search programs", *Nucleic Acids Res.* 25:3389-3402.

Other reports: [Search Summary](#) [[Taxonomy reports](#)] [[Multiple alignment](#)] **NEW**

Search Parameters

Program	blastp
Word size	2
Expect value	200000
Hitlist size	100
Gapcosts	9,1
Matrix	PAM30
Threshold	11
Filter string	F
Genetic Code	1
Window Size	40

Database

Posted date	Jan 5, 2010 4:42 AM
Number of letters	3,507,711,756
Number of sequences	10,280,272
Entrez query	none

Karlin-Altschul statistics

Params	Ungapped	Gapped
Lambda	0.337428	0.294
K	0.26497	0.11
H	2.091	0.61

Results Statistics

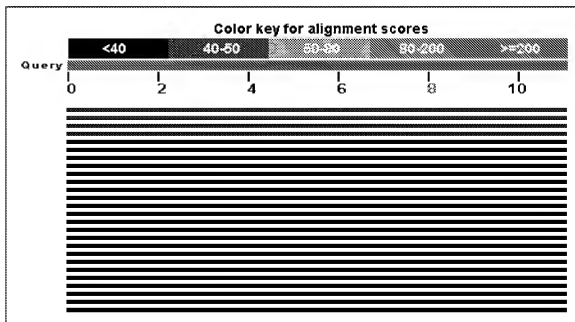
Length adjustment	1
Effective length of query	10
Effective length of database	3497431484
Effective search space	34974314840
Effective search space used	34974314840

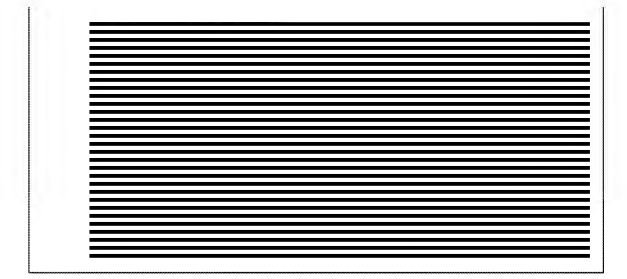
[Graphic Summary](#)[Show Conserved Domains](#)

No putative conserved domains have been detected

**Distribution of 100 Blast Hits on the Query Sequence**

An overview of the database sequences aligned to the query sequence is shown. The score of each alignment is indicated by one of five different colors, which divides the range of scores into five groups. Multiple alignments on the same database sequence are connected by a striped line. Mousing over a hit sequence causes the definition and score to be shown in the window at the top, clicking on a hit sequence takes the user to the associated alignments. New: This graphic is an overview of database sequences aligned to the query sequence. Alignments are color-coded by score, within one of five score ranges. Multiple alignments on the same database sequence are connected by a dashed line. Mousing over an alignment shows the alignment definition and score in the box at the top. Clicking an alignment displays the alignment detail.





Descriptions

E	Sequences producing significant alignments:	Score	
		(Bits)	Value
gb AC005366.1	middle S protein [Hepatitis B virus]	41.4	0.012
gb AC005365.1	S protein [Hepatitis B virus]	41.4	0.012
gb AC005363.1	large S protein [Hepatitis B virus]	41.4	0.012
gb AAE36498.1	S antigen [Hepatitis B virus]	41.4	0.012
gb AC105186.1	S protein [Hepatitis B virus]	38.0	0.13
gb AB281118.1	S protein [Hepatitis B virus]	38.0	0.13
dbj BA66776.1	hepatitis B surface antigen [Hepatitis B virus]	38.0	0.13
emb CAM58621.1	preS1 protein [Hepatitis B virus]	38.0	0.13
emb CAM58620.1	preS2 protein [Hepatitis B virus]	38.0	0.13
gb AE54464.1	surface antigen [Hepatitis B virus]	38.0	0.13
gb AEV5421.1	S protein [Hepatitis B virus]	37.5	0.17
gb AEV5423.1	S protein [Hepatitis B virus]	37.5	0.17
gb AC869469.1	truncated middle S protein [Hepatitis B virus]	36.3	0.42
gb AC869469.1	truncated large S protein [Hepatitis B virus]	36.3	0.42
gb AC869392.1	S protein [Hepatitis B virus]	36.3	0.42
gb AC869391.1	middle S protein [Hepatitis B virus]	36.3	0.42
gb AC869390.1	large S protein [Hepatitis B virus]	36.3	0.42
gb AC869389.1	truncated S protein [Hepatitis B virus]	36.3	0.42
gb AC869388.1	truncated large S protein [Hepatitis B virus]	36.3	0.42
gb AC869387.1	large S protein [Hepatitis B virus]	36.3	0.42
gb AC869386.1	small S protein [Hepatitis B virus]	36.3	0.42
gb AC869385.1	large S protein [Hepatitis B virus]	36.3	0.42
dbj BAH63688.1	hepatitis B surface antigen [Hepatitis B virus]	36.3	0.42
dbj BAH63687.1	hepatitis B surface antigen [Hepatitis B virus]	36.3	0.42
dbj BAH63686.1	hepatitis B surface antigen [Hepatitis B virus]	36.3	0.42
dbj BAH63685.1	hepatitis B surface antigen [Hepatitis B virus]	36.3	0.42
gb AC748743.1	S protein [Hepatitis B virus]	36.3	0.42
gb AC748742.1	middle S protein [Hepatitis B virus]	36.3	0.42
gb AC748741.1	large S protein [Hepatitis B virus]	36.3	0.42
gb ABV57421.1	middle S protein [Hepatitis B virus]	36.3	0.42
gb ABV57415.1	large S protein [Hepatitis B virus]	36.3	0.42
gb ABV57405.1	S protein [Hepatitis B virus] >gb ABV57406.1 ...	36.3	0.42
gb ABV57401.1	S protein [Hepatitis B virus]	36.3	0.42
gb ABV54233.1	S protein [Hepatitis B virus]	36.3	0.42
gb ABV54242.1	S protein [Hepatitis B virus]	36.3	0.42
gb ABV54240.1	S protein [Hepatitis B virus]	36.3	0.42
gb ABV54239.1	S protein [Hepatitis B virus]	36.3	0.42
gb ABV54237.1	S protein [Hepatitis B virus]	36.3	0.42
gb ABV54236.1	S protein [Hepatitis B virus]	36.3	0.42
gb ABV54234.1	S protein [Hepatitis B virus]	36.3	0.42
gb ABV54233.1	S protein [Hepatitis B virus]	36.3	0.42
gb ABV54232.1	S protein [Hepatitis B virus]	36.3	0.42
gb ABV54230.1	S protein [Hepatitis B virus] >gb ABV57420.1 ...	36.3	0.42
gb ABV54228.1	S protein [Hepatitis B virus] >gb ABV54238.1 ...	36.3	0.42
gb ABV54226.1	S protein [Hepatitis B virus]	36.3	0.42
gb ABV54223.1	S protein [Hepatitis B virus]	36.3	0.42
gb ABQ1286.1	S protein [Hepatitis B virus] >gb ABQ1286.1 ...	36.3	0.42
gb AB18692.1	preS2/S protein [Hepatitis B virus]	36.3	0.42
gb ABE01501.1	S protein [Hepatitis B virus]	36.3	0.42
dbj BAE00094.1	large S protein [Hepatitis B virus]	36.3	0.42
gb AAH01936.1	preS1/preS2 surface [Hepatitis B virus]	36.3	0.42
gb AAAT28066.1	S protein [Hepatitis B virus]	36.3	0.42
gb AAAT28065.1	middle S protein [Hepatitis B virus]	36.3	0.42
gb AAAT26664.1	large S protein [Hepatitis B virus]	36.3	0.42
gb AAAT15684.1	surface antigen [Hepatitis B virus]	36.3	0.42
dbj BA002214.1	S protein [Hepatitis B virus]	36.3	0.42
emb CAE54949.1	S protein [Hepatitis B virus]	36.3	0.42

gb EAC92973.1	surface antigen [Hepatitis B virus]	36.3	0.42
emb CAA6436.1	pre-S2 protein [Hepatitis B virus]	36.2	0.42
emb CAA6437.1	S protein [Hepatitis B virus]	36.2	0.42
gi 1067929.1 W5556_HEV85	RecName: Full=Large envelope protein;...	36.3	0.42
gb AD803191.1	large S protein [Hepatitis B virus]	35.6	0.57
gb AD803092.1	small surface protein [Hepatitis B virus]	35.6	0.57
gb AD803551.1	middle surface protein [Hepatitis B virus]	35.6	0.57
gb AD803550.1	large surface protein [Hepatitis B virus]	35.6	0.57
gb AD803543.1	small surface protein [Hepatitis B virus]	35.8	0.57
gb AD803542.1	middle surface protein [Hepatitis B virus]	35.8	0.57
gb AD803541.1	large surface protein [Hepatitis B virus]	35.8	0.57
gb AC82537.1	small surface protein [Hepatitis B virus]	35.9	0.57
gb AD82536.1	middle surface protein [Hepatitis B virus]	35.9	0.57
gb AD82535.1	large surface protein [Hepatitis B virus]	35.9	0.57
gb AD82534.1	small surface protein [Hepatitis B virus]	35.8	0.57
gb AD82533.1	middle surface protein [Hepatitis B virus]	35.8	0.57
gb AD82532.1	large surface protein [Hepatitis B virus]	35.6	0.57
gb AD82531.1	small surface protein [Hepatitis B virus]	35.6	0.57
gb AD82530.1	middle surface protein [Hepatitis B virus]	35.8	0.57
gb AD82529.1	large surface protein [Hepatitis B virus]	35.8	0.57
gb AD82528.1	small surface protein [Hepatitis B virus]	35.8	0.57
gb AD82527.1	middle surface protein [Hepatitis B virus]	35.8	0.57
gb AD82526.1	large surface protein [Hepatitis B virus]	35.9	0.57
gb AD82513.1	small surface protein [Hepatitis B virus]	35.9	0.57
gb AD82512.1	middle surface protein [Hepatitis B virus]	35.8	0.57
gb AD82511.1	large surface protein [Hepatitis B virus]	35.6	0.57
gb AD82510.1	small surface protein [Hepatitis B virus]	35.6	0.57
gb AD82509.1	middle surface protein [Hepatitis B virus]	35.6	0.57
gb AD82508.1	large surface protein [Hepatitis B virus]	35.8	0.57
gb AD82507.1	small surface protein [Hepatitis B virus]	35.8	0.57
gb AD82506.1	middle surface protein [Hepatitis B virus]	35.8	0.57
gb AD82505.1	large surface protein [Hepatitis B virus]	35.8	0.57
gb AD82499.1	small surface protein [Hepatitis B virus]	35.8	0.57
gb AD82498.1	middle surface protein [Hepatitis B virus]	35.9	0.57
gb AD82497.1	large surface protein [Hepatitis B virus]	35.8	0.57
gb AD82496.1	small surface protein [Hepatitis B virus]	35.6	0.57
gb AD82495.1	middle surface protein [Hepatitis B virus]	35.6	0.57
gb AD82494.1	large surface protein [Hepatitis B virus]	35.6	0.57
gb AC82752.1	S protein [Hepatitis B virus]	35.8	0.57
gb AC82751.1	middle S protein [Hepatitis B virus]	35.8	0.57
gb AC82750.1	large S protein [Hepatitis B virus]	35.8	0.57
dbj EAB82785.1	hepatitis B surface antigen [Hepatitis B virus]	35.8	0.57
dbj EAB82782.1	hepatitis B surface antigen [Hepatitis B virus]	35.8	0.57

Alignments Select All Get selected sequences Distance tree of results Multiple alignment NEW

>gb|AC005366.1| middle S protein [Hepatitis B virus]
Length=281

Score = 41.4 bits (90), Expect = 0.012
Identities = 11/11 (100%), Positives = 11/11 (100%), Gaps = 0/11 (0%)

Query 1 AKYLWVWVASVR 11
AKYLWVWVASVR
Sbjct 214 AKYLWVWVASVR 224

>gb|AC005365.1| S protein [Hepatitis B virus]
Length=226

Score = 41.4 bits (90), Expect = 0.012
Identities = 11/11 (100%), Positives = 11/11 (100%), Gaps = 0/11 (0%)

Query 1 AKYLWVWVASVR 11
AKYLWVWVASVR

Sbjct 159 AKYLWVWVASVR 169

>gb|AC005362.1| large S protein [Hepatitis B virus]
Length=400

Score = 41.4 bits (90), Expect = 0.012
Identities = 11/11 (100%), Positives = 11/11 (100%), Gaps = 0/11 (0%)

Query 1 AKYLWVWVASVR 11
AKYLWVWVASVR
Sbjct 333 AKYLWVWVASVR 343

>gb|AAF36498.1| S antigen [Hepatitis B virus]
Length=226

Score = 41.4 bits (90), Expect = 0.012
Identities = 11/11 (100%), Positives = 11/11 (100%), Gaps = 0/11 (0%)

Query 1 AKYLWVWVASVR 11
AKYLWVWVASVR
Sbjct 159 AKYLWVWVASVR 169

>gb|ACI05186.1| S protein [Hepatitis B virus]
Length=226

Score = 38.0 bits (82), Expect = 0.13
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLWVWVASVR 11
AKYLW WASVR
Sbjct 159 AKYLWXWASVR 169

>gb|ABZ81118.1| S protein [Hepatitis B virus]
Length=174

Score = 38.0 bits (82), Expect = 0.13
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLWVWVASVR 11
AKYLW WASVR
Sbjct 153 AKYLWXWASVR 163

>dbj|BAG06746.1| hepatitis B surface antigen [Hepatitis B virus]
Length=132

Score = 38.0 bits (82), Expect = 0.13
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLWVWVASVR 11
AKYLW WASVR
Sbjct 120 AKYLWXWASVR 130

>emb|CAM58621.1| preS1 protein [Hepatitis B virus]
Length=400

Score = 38.0 bits (82), Expect = 0.13
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLWVWVASVR 11
AKYLW WASVR
Sbjct 333 AKYLWXWASVR 343

>emb|CAM58620.1| preS2 protein [Hepatitis B virus]
Length=281

Score = 38.0 bits (82), Expect = 0.13
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLWVWVASVR 11
AKYLW WASVR
Sbjct 214 AKYLWXWASVR 224

>gb|ABB54464.1| surface antigen [Hepatitis B virus]
Length=195

Score = 38.0 bits (82), Expect = 0.13
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLMVWASVR 11
AKYLW WASVR
Sbjct 143 AKYLWXWASVR 153

>gb|ABV54241.1| S protein [Hepatitis B virus]
Length=226

Score = 37.5 bits (81), Expect = 0.17
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLMVWASVR 11
AKYLW WASVR
Sbjct 159 AKYLWAWASVR 169

>gb|ABV54231.1| S protein [Hepatitis B virus]
Length=226

Score = 37.5 bits (81), Expect = 0.17
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLMVWASVR 11
AKYLW WASVR
Sbjct 159 AKYLWAWASVR 169

>gb|ACX69410.1| truncated middle S protein [Hepatitis B virus]
Length=270

Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLMVWASVR 11
AKYLW WASVR
Sbjct 214 AKYLWGWASVR 224

>gb|ACX69409.1| truncated large S protein [Hepatitis B virus]
Length=389

Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLMVWASVR 11
AKYLW WASVR
Sbjct 333 AKYLWGWASVR 343

>gb|ACX69392.1| S protein [Hepatitis B virus]
Length=226

Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLMVWASVR 11
AKYLW WASVR
Sbjct 159 AKYLWGWASVR 169

>gb|ACX69391.1| middle S protein [Hepatitis B virus]
Length=281

Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLMVWASVR 11
AKYLW WASVR
Sbjct 214 AKYLWGWASVR 224

>gb|ACX69390.1| large S protein [Hepatitis B virus]
Length=400

Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLMVWASVR 11
AKYLW WASVR
Sbjct 333 AKYLGWASVR 343

>gb|ACU24886.1| truncated S protein [Hepatitis B virus]
Length=215

Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLMVWASVR 11
AKYLW WASVR
Sbjct 159 AKYLGWASVR 169

>gb|ACU24883.1| truncated large S protein [Hepatitis B virus]
Length=388

Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLMVWASVR 11
AKYLW WASVR
Sbjct 332 AKYLGWASVR 342

>gb|ACT90881.1| large S protein [Hepatitis B virus]
Length=400

Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLMVWASVR 11
AKYLW WASVR
Sbjct 333 AKYLGWASVR 343

>gb|ACT79861.1| small S protein [Hepatitis B virus]
Length=226

Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLMVWASVR 11
AKYLW WASVR
Sbjct 159 AKYLGWASVR 169

>gb|ACT79860.1| large S protein [Hepatitis B virus]
Length=400

Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLMVWASVR 11
AKYLW WASVR
Sbjct 333 AKYLGWASVR 343

>dbj|BAH83888.1| hepatitis B surface antigen [Hepatitis B virus]
Length=132

Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLMVWASVR 11
AKYLW WASVR
Sbjct 120 AKYLGWASVR 130

>dbj|BAH83824.1| hepatitis B surface antigen [Hepatitis B virus]
Length=132

Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLWVWASVR 11
Sbjct 120 AKYLWGWASVR 130

>dbj|BAH83817.1| hepatitis B surface antigen [Hepatitis B virus]
Length=132
Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLWVWASVR 11
Sbjct 120 AKYLWGWASVR 130

>dbj|BAH84511.1| hepatitis B surface antigen [Hepatitis B virus]
Length=132
Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLWVWASVR 11
Sbjct 120 AKYLWGWASVR 130

>gb|ACJ48743.1| S protein [Hepatitis B virus]
Length=226
Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLWVWASVR 11
Sbjct 159 AKYLWGWASVR 169

>gb|ACJ48742.1| middle S protein [Hepatitis B virus]
Length=281
Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLWVWASVR 11
Sbjct 214 AKYLWGWASVR 224

>gb|ACJ48741.1| large S protein [Hepatitis B virus]
Length=400
Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLWVWASVR 11
Sbjct 333 AKYLWGWASVR 343

>gb|ABV57421.1| middle S protein [Hepatitis B virus]
Length=281
Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLWVWASVR 11
Sbjct 214 AKYLWGWASVR 224

>gb|ABV57415.1| large S protein [Hepatitis B virus]
Length=400
Score = 36.3 bits (78), Expect = 0.42
Identities = 10/11 (90%), Positives = 10/11 (90%), Gaps = 0/11 (0%)

Query 1 AKYLWVWASVR 11
Sbjct 333 AKYLWGWASVR 343